



METHODS FOR MANUFACTURING POLYSACCHARIDE DERIVATIVES

ABSTRACT OF THE DISCLOSURE

The invention is based upon the discovery that insoluble, polysaccharides, such as inulin and dextran, can be enzymatically modified in an organic solvent. Thus, the invention relates to methods for making a high molecular weight polyhydroxy polymer, such as a polysaccharide, inulin or dextran derivative, comprising reacting an acyl donor and the polymer, such as inulin or dextran, to form an acyl ester of the polymer, such as inulin dextran, in a reaction medium comprising an organic solvent in the presence of a hydrolytic enzyme; methods for making a polymer, such as a polysaccharide, an inulin or dextran polymer, comprising reacting a polymerizable acyl donor and polyhydroxyl polymer in a reaction medium comprising an organic solvent in the presence of a hydrolytic enzyme thereby making an polymeric monomer, such as an inulin monomer, and polymerizing, preferably dimerizing, the monomer, thereby making a novel polymer, such as an inulin polymer. The invention further relates to novel products as can be produced by the processes described herein, pharmaceutical compositions containing them and the use of the novel polymers described herein in methods for the manufacture of a pharmaceutical composition or medicament. Further, the invention relates to a method of delivering an active agent to a patient comprising administering to the patient a pharmaceutical composition described herein.